I claim:

1.   A diagnostic system comprising:

    an immunoassay analyzer;

    a clinical chemistry analyzer;

    an automatic sample handling device coupled between said immunoassay analyzer and said clinical chemistry analyzer to allow sharing of samples therebetween; and

    a processor in communication with said immunoassay analyzer and said clinical chemistry analyzer, wherein said processor commands said immunoassay analyzer and clinical chemistry analyzer to execute measurements specified by a program executed by the processor in order to facilitate diagnosis of a pathology for a subject according to a reflex algorithm which includes at least one immunoassay and at least one clinical chemistry assay.

2.   The diagnostic system according to claim 1, wherein said immunoassay analyzer and said clinical chemistry analyzer each have a respective local processor in communication with said processor, wherein the local processors respectively control execution of measurements specified by said processor on the immunoassay and clinical chemistry analyzer.

3.   The diagnostic system according to claim 2, wherein said processor communicates with each of said local processors via a network.

4.   The diagnostic system according to claim 3, wherein said network is a public or private network.

5.   The diagnostic system according to claim 2, wherein said local processors each independently and selectively execute a local program or subroutine to control a sequence of measurements in response to a command from said processor.

6.   The diagnostic system according to claim 1, wherein said processor

2 supports the diagnosis of the pathology.

1 7. The diagnostic system according to claim 1, wherein the diagnosis of the

2 pathology for the subject is based, at least in part, on results from the measurments

3 executed according to said reflex algorithm and on additional stored information

4 concerning the subject.

1 8. The diagnostic system according to claim 1, further comprising a

2 hematology analyzer coupled to said processor, and wherein said measurements specified

3 by the program include a measurement executed by the hematology analyzer in response

4 to a command from said processor.

1 9. A system for executing a sequence of biochemical marker measurement

2 steps, including immunoassay and a clinical chemistry assay measurements, to generate

3 an indication of a pathology, the biochemical marker measurement steps including

4 measuring a concentration level or an activity of at least one biochemical marker in a

5 urine, serum, plasma or whole blood sample, the system comprising:

6 means for performing an immunoassay measurement;

7 means for performing a clinical chemistry assay measurement;

8 means for sample handling between the immunoassay measurment means

9 and the clinical chemistry assay measurement means;

10 means for storing information representing a reflex algorithm indicating a

11 plurality of predetermined sequences of biochemical marker measurements;

12 means for receiving information concerning outputs from biochemical

13 marker measurements conducted on the immunoassay means and the clinical chemistry

14 assay means;

15 means for selectively commanding said immunoassay measurement means

16 and said clinical chemistry assay means to perform a specified biochemical marker

17 measurement according to said reflex algorithm; and

18 means for specifying an indication of the pathology according to the stored

19 information in response to the information concerning outputs from biochemical marker

20 measurements.

1   10.   A system for executing a sequence of biochemical marker measurement

2   steps, including immunoassay and clinical chemistry assays, the biochemical marker

3   measurement steps including measuring a concentration level or an activity of at least one

4   biochemical marker in a serum, plasma or whole blood sample obtained from said

5   individual at a time specified by a reflex algorithm, the system comprising:

6   immunoassay instrumentation that allows automatic execution of an

7   immunoassay measurement;

8   clinical chemistry instrumentation that allows automatic execution of a

9   clinical chemistry assay measurement;

10   a sample handling device coupled between said immunoassay

11   instrumentation and said clinical chemistry instrumentation to allow sharing of samples

12   therebetween;

13   a computer-readable medium that stores information that represents the

14   reflex algorithm; and

15   a processor coupled to said immunoassay instrumentation, said clinical

16   chemistry instrumentation, and said computer-readable medium, wherein said processor

17   receives information concerning outputs from biochemical marker measurements

18   conducted on the immunoassay instrumentation and on the clinical chemistry

19   instrumentation, and selectively commands said immunoassay instrumentation and said

20   clinical chemistry instrumentation to execute a biochemical marker measurement

21   according to the reflex algorithm.

1   11.   The system according to claim 10, wherein said processor selectively

2   suggests an indication of a pathology according to the reflex algorithm in response to

3   receiving the information concerning outputs from biochemical marker measurements.

1   12.   The system according to claim 10, wherein said immunoassay

2   instrumentation and said clinical chemistry instrumentation each includes a respective

3   processor in communication with said processor.

1   13.   A computer program embodied on a computer-readable medium, for

2   controlling automatic execution of assay measurements by clinical chemistry assay

3   instrumentation and by immunoassay instrumentation, comprising:

4   a first code segment including a sequence of instructions to determine

5   measurements to be executed by the clinical chemistry assay instrumentation and the

6   immunoassay instrumentation according to a stored representation of a reflex algorithm to

7   facilitate diagnosis of a pathology; and

8   a communication code segment including instructions operative in sending

9   to the immunoassay instrumentation and the clinical chemistry instrumentation commands

10   to execute the determined measurements, and instructions operative in receiving

11   information concerning results from the measurements executed by the immunoassay

12   instrumentation and the clinical chemistry instrumentation.

1   14.   The computer program embodied on a computer-readable medium

2   according to claim 13, further comprising a code segment to output an indication of a

3   pathology on the reflex algorithm and on the measurements.

1   15.   The computer program embodied on a computer-readable medium

2   according to claim 13, wherein said first code segment and said communication code

3   segment are executed on a first processor, and wherein the immunoassay instrumentation

4   and the clinical chemistry instrumentation each have a respective processor in

5   communication with said first processor.

1   16.   In an automated diagnostic system including a means for automatically

2   executing immunoassays, a means for automatically executing clinical chemistry assays, a

3   means for sharing samples between the clinical chemistry assay means and the

4   immunoassay means, and a processor, a method for detecting a pathology in an

5   individual, comprising the steps of:

6   selectively performing with said immunoassay means and said clinical

7   chemistry assay means, responsive to commands from said processor to the immunoassay

8   and clinical assay means, one of a plurality of sequences of biochemical marker

9   measurement steps prescribed by a stored representation of a decision tree, each of the

10   biochemical marker measurement steps including measuring a concentration level or

11   activity of at least one biochemical marker in a urine, serum, plasma or whole blood

12   sample obtained from said individual at a time specified by the decision tree, each

13   sequence of the decision tree beginning with a common first biochemical marker

14   measurement step conducted on a first urine, serum, plasma or whole blood sample

15   obtained from said individual at a first time specified by the decision tree, each of the

16   biochemical marker measurement steps subsequent to the common first step selectively

17   performed based on results from a precedent biochemical marker measurement step, each

18   sequence terminating in a respective final biochemical marker measurement step

19   conducted on urine, serum, plasma or whole blood sampled from said individual at a

20   time prescribed by the stored representation the decision tree; and

21   providing an indication of the pathology for said individual based on the

22   sequence performed and on the results of the respective final biochemical marker

23   measurement step.

1   17.   The method according to claim 16, wherein said step of providing an

2   indication includes providing the indication based on the results of the biochemical

3   marker measurements in the sequence performed, thereby depending on the specific

4   sequence performed.

1   18.   The method according to claim 16, wherein one or more points along said

2   decision tree indicate a recommended treatment or test other than the biochemical marker

3   measurements within the sequences of the decision tree.

1   19.   The method according to claim 18, wherein the recommended treatment or

2   test other than the biochemical marker measurements is provided subsequent to one or

3   more of said respective final biochemical marker measurement steps.

1   20.   A method for executing a sequence of biochemical marker measurement

2   steps using automatic immunoassay measurement instrumentation and automatic clinical

3   chemistry assay measurement instrumentation, the biochemical marker measurement steps

4   including measuring a concentration level or an activity of at least one biochemical

5   marker in a serum, plasma or whole blood sample, the method comprising the steps of:

6   a processor receiving information selectively from the automatic

7   immunoassay and clinical chemistry assay instrumentation concerning outputs from

8   biochemical marker measurements conducted on the automatic immunoassay

9   instrumentation or clinical chemistry assay instrumentation; and

10   the processor selectively sending commands to the automatic immunoassay

11   instrumentation and the clinical chemistry assay instrumentation to execute a biochemical

12   marker measurement selected by the processor based on a stored representation of a

13   reflex algorithm.

1   21.   The method according to claim 20, further comprising the processor

2   executed step of specifying, after completing execution of the sequence, an indication of

3   a pathology according to the stored representation of the reflex algorithm and on the

4   information concerning outputs from biochemical marker measurements.